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REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
BROOKE ARMY MEDICAL CENTER
FORT SAM HOUSTON, TEXAS 78234-6200



MCHE-ZX

19 May 1995

MEMORANDUM THRU Colonel Herbert K. Reamey III, Chief of Staff,
Brooke Army Medical Center, Ft Sam Houston,
TX 78234-6200

FOR U.S. AMEDD Center and School, Building 2841, ATTN: HSHA-MH/
Rene L. Pryor, 3151 Scott Road, Ft Sam Houston, TX
78234-6100

SUBJECT: Graduate Management Project

In accordance with instructions contained in the Administrative Residency Manual, the Graduate Management Project is submitted by COL Karl K. Harris, Healthcare Administrative Resident, Brooke Army Medical Center, Ft Sam Houston, TX.

Encl

Karl K. Harris
KARL K. HARRIS
Colonel, DC
Administrative Resident

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THE CREATION OF A SINGLE MEDICAL DEPARTMENT
THROUGH THE MERGER OF TWO SEPARATE MEDICAL
DEPARTMENTS LOCATED AT SEPARATE INSTALLATIONS

A Graduate Management Project
Submitted to the Faculty of
Baylor University
In Partial Fulfillment of the
Requirements for the Degree
of
Master of Healthcare Administration
by
Colonel Karl K. Harris, DC, USA
May 1995

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ABSTRACT

The merger of Brooke Army Medical Center (BAMC) and Darnall Army Community Hospital (DACH) into an expanded health science center has been initiated. The two separate pediatric departments are the first departments to merge.

An organizational survey of the two pediatric departments was done to determine if there were any identifiable groups that may prefer to remain separate, rather than merge. The participants were also asked for their attitude toward choice for merger, and its possible future effects upon the domains of mission accomplishment, compared to their current separate department status.

The "patient care employment" group at BAMC was the only statistically significant group that preferred to remain separate. All groups viewed the merger as positive in mission accomplishment. Statistically significant mission domains were: the "patient care" and "graduate medical education (GME)" mission domains at BAMC and at the total combined sites; the "GME" mission domain at DACH.

Providing the participants with more input opportunity, and education about the merger, are ways that may be used to increase ownership and support for the merger, and thereby, increase the opportunities for success.

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* When used in this publication, the words "he", "him", or "men" are used to represent both the masculine and feminine genders unless otherwise stated.

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CHAPTER 1

INTRODUCTION

Conditions Which Prompted The Study

Brooke Army Medical Center (BAMC) is located on Fort Sam Houston, Texas, and is one of eight medical centers (MEDCENS) within the U.S. Army Medical Command (MEDCOM). BAMC supports an active duty population of approximately 15,000 soldiers which includes a BAMC staff of nearly 3000 personnel spread about Ft. Sam Houston in 59 different buildings.

BAMC is also the headquarters location for the South Central Health Services Support Area (HSSA) that includes Ft. Hood, Ft. Sill, Ft. Polk, and Panama. The Commanding General (CG) of BAMC is both the HSSA Commander, with a readiness focus, and the Brooke Army Medical Center/Brooke Army Hospital Commander.

BAMC provides Graduate Medical Education (GME) in 23 specialties and trains 275 specialists annually. GME programs in the departments of obstetrics, pediatrics, and medicine would benefit from access to a larger and younger patient population base than is available at Fort Sam Houston to provide a wider and more intense educational

experience for the residents.

Darnall Army Community Hospital (DACH) at Fort Hood provides service for approximately 45,000 active duty soldiers. Ft. Hood is not only the largest U.S. Army post, but the largest military post in the free world. Due to a lack of certain available services, and a need for more specialized medical care, many Darnall patients are referred to BAMC. Operating with a staff of approximately 1500, Darnall is especially busy in the specialties of obstetrics (300+ deliveries per month), pediatrics (46,000+ children), and ambulatory care.

In this period of downsizing, shrinking budgets, and demand for increased accountability, the suggestion has been made to combine, or internally merge, Darnall Army Community Hospital with Brooke Army Medical Center to form an expanded medical center. The vision of the BAMC CG is: "Darnall Army Community Hospital and Brooke Army Medical Center join forces to form a world class, expanded medical center, operating as a single Army hospital in South Central Texas, bound together by leading-edge information technology, focused on medically supporting America's Army, preferred by our beneficiaries as a center for their health care, and renowned for its premier quality education programs."

This vision is intended to increase the scope of patient care services and accessibility at Fort Hood while concurrently improving the intensity, and volume of patient

care experience to selected GME programs at the medical center. The readiness focus of the HSSA would be increased by a more direct relationship with the III Corps Headquarters and the concentrated active duty population located at Fort Hood. This expanded medical center does not have a name yet, but the project for its enactment has been code named "BADAMC".

Mergers are difficult to implement. They represent enormous change for the organizations and the people that compose them. The threatened change may cause anxiety and fear due to the potential loss of power, position, respect, or status as compared to what exists at the currently separated community hospital and medical center. In this period of downsizing and reengineering, the threat of loss of employment is more prevalent than at any time in recent history and this magnifies employees' fear of change and uncertainty.

The creation of a new organizational structure by the merging of two organizational structures with their own culture and symbols is very difficult and often impossible. Productivity in merged organizations often decreases because the members (stakeholders) do not view the change as a benefit to them or the organization's purpose. This fear of change could lead to resistance to the merger by selected groups of people within each organization to be merged. This resistance could hamper or prevent the successful creation

of an expanded medical center.

The merger of the pediatric departments at BAMC and DACH is one of the primary motivators for the creation of an expanded medical center. There is an extensive pediatric GME program at BAMC and a large pediatric patient population base at DACH.

Through this merger, the currently separate pediatric departments at each installation would be joined into a single pediatric department with one department chief operating one chain of command. This single pediatric department is expected to be the first merged medical department in BADAMC and serve as an "early success" example for the other departments to follow.

This single department entity could then move personnel from one site to the other on an "as needed" basis. This sharing would start with the residency program residents and mentors, but could grow to include other personnel assets. Sharing of merged assets could later include other resources such as budgets, supplies, and/or equipment.

The fact that BAMC and DACH are 150 miles apart is an obvious barrier to this merger concept. Advanced information management tools would be required such as dedicated phone lines, video conferencing, and telemedicine capabilities. However, even with these innovations, staff personnel, patients, and patient families would still need to travel that 150 mile distance on a frequent and regular basis.

Potential problems or complications from the merger that might affect the staff personnel might include: lack of housing availability, travel inconvenience and expense, and family separation or complications. Personnel may not want to live or work at one of these two sites due to spousal employment, home purchase, post-military employment opportunities, schooling for children, community amenities, or other reasons. In addition to these potential problems, the significant change that this merger represents may encourage resistance and opposition.

Statement Of The Problem

The research problem for this study is to determine if there are groups of individuals in the currently separate pediatric departments at DACH and BAMC that prefer to remain two separate pediatric departments instead of merging into a single "BADAMC" pediatric department.

Literature Review

Organization

An organization is a social entity composed of people that interact to perform essential functions. An organization is goal directed in that it exists for a purpose. It is deliberately structured to perform work activities by subdividing into separate departments and sets

of activities. An organization has identifiable boundaries with a distinct membership. These members contribute to the organization in return for money, prestige, or other gain (Daft 1992). The BADAMC project will affect or change all of these aspects of an organization.

An organization has internal characteristics or structural dimensions. These structural dimensions are: formalization: written documents to describe behavior and activities; standardization: uniformity for similar work activities; specialization: subdivision of organizational tasks into separate jobs; hierarchy of authority: chain of command and span of control; complexity: number of activities or subsystems; centralization: hierachal level of decision authority; professionalism: level of formal education and training; and personnel ratios: deployment of people to various functions and departments (Daft, 1992).

There are also contextual dimensions that characterize an entire organization. These contextual dimensions are: size, technology, environment, goals, strategies, and culture (Daft, 1992).

All of these structural and contextual dimensions are interdependent. The BADAMC project will affect or change all of these dimensions.

An organization has structure. This structure describes the components of the organization and how these components fit together (Ivancevich and Matteson, 1993). Structure is

reflected in the organization chart. The key components are: formal reporting relationships; groupings of individuals into departments and departments into the organization; and design of systems for communications, coordination, and integration across departments (Daft 1992).

Structure determines the formal distribution of power within an organization. Decision making allocation, patterns of communication, and flows of information are determined by the organization's structure. Formal power and authority are created by specifying certain individuals to perform specific job tasks and make certain decisions. Structure also encourages informal power allotment through its effect upon information and communication within the system (Ivancevich and Matteson, 1993).

The organizational structure of BADAMC has been the leading source of disagreement in the BADAMC project as the members recognize the change it represents and the effect it will have over the current distribution of power.

An organization requires commitment from its members in order to be effective. Organizational commitment has three forms: 1) moral involvement based on shared organizational goals and values; 2) calculative involvement based on an exchange relationship between member and organization; and 3) alienative involvement based on coercive power (Tumulty et al, 1995).

Commitment is strongest with a moral basis and weakest

with an alienative basis. Most commitment is a combination of all three. If the BADAMC merger is perceived as a detriment to the exchange relationship, the commitment to the changed organization will decrease.

Departments

Organizations break down total tasks into successively smaller ones. Management combines these divided tasks into groups of departments. Departmentalization can be based on different criteria. Function is one of the most common criteria. A disadvantage of functional departments is that specialists are working with and encouraging each other in their own separate area of expertise and interest. These specialists frequently favor departmental goals over organizational goals (Ivancevich and Matteson, 1993). A pediatric medical department is an example of a functional department.

Territory or geography is another basis for departmentalization. Physical dispersion makes centralized coordination difficult and keeping geographically dispersed departments as separate entities is the norm (Ivancevich and Matteson, 1993). BADAMC will attempt to overcome the 150 mile geographical separation between DACH and BAMC through improved information management technology.

One of the major determinants of the size of a department is span of control. The maximum number of people

and separate locations within a department are determined by the need for interpersonal relationships between management and employees. The amount of required contact for coordination and communication determines how large and dispersed a department can be and still be manageable (Ivancevich and Matteson, 1993). The BADAMC project envisions expanded use of information management, video-teleconferences, and telemedicine to expand its span of control boundaries.

Culture

Each organization has its own separate and unique culture. A new organization formed from the merger of two different organizations requires the development of a new culture that can be adopted by both organizations (Anderson, 1991).

Culture is hard to define and often can only be understood after working in an organization for some time (Sherer, 1994). It is "the way we do things around here" based upon systems, processes, structures, and reward mechanisms (Boston, 1995). It is what employees believe, value, and expect (Ivancevich and Matteson, 1993). It is also shared symbols and cognitive schemes that tie people together (Tichy, 1983). Every organization is a tribe with its own beliefs, values, customs and folkways (Bolman and Deal, 1994).

Organizational culture influences individuals, groups and processes (Bohlmann, 1993). Some cultures infuse workplaces with passion, purpose and faith. Others breed cynicism, hostility, and indifference. The current culture provides a feeling of stability, continuity and identity, and thus people resist change to a new culture. This resistance is a very powerful force that cannot be ignored (Ivancevich and Matteson, 1993; Bolman and Deal, 1994). DACH and BAMC are both Army medical healthcare facilities, but their cultures are very different and this difference must be addressed in the new BADAMC culture.

Change

The world is changing at such a fast pace that intuitive or experience based incremental changes are inadequate and large scale strategic reorientations are often required (Tichy, 1983).

The BADAMC project is a strategic or radical change to the organization that will create a new equilibrium in a transformed organization. Radical or strategic change is usually due to external pressures rather than to an internal desire to change. Competent organizations today view change as a normal way of life and necessary for survival (Goodstein and Burke, 1991).

The goal is to act decisively at just the right time. The paradox is that too much change too soon leads to

backlash and resistance, while too little change too late leads to stagnation. Either result leads to failure and threatens survival. A dynamic equilibrium between stability and change is necessary: stable enough to ensure a measure of predictability and security, but flexible enough to move in new and different directions (McKibbin, 1995).

The concept of "stable instability" is proposed by some as a way for organizations to cope with major social, economic, political, or social shifts. A "requisite level" of innovation would be matched with the degree of change in the environment. However, as mentioned, too much change too fast promotes resistance. Organizations should change in incremental steps, be open to feedback, make adjustments, and take more steps. Only in emergency survival situations can people immediately accept revolutionary change (McKibbin, 1995).

Organizational change in healthcare has some unique characteristics that affect change strategies. Healthcare involves labor intensive processes centered around high status professionals. Changes that affect these individuals and their delivery of services is likely to invite their resistance (Shortell and Kaluzny, 1988; Appenzeller, 1993).

The classic doctor-patient relationship centers on the dominant and decision-making physician. Resistance to change is common in health care strategies if the physician's dominant role needs are not catered to and treated as being

the most important (Shortell and Kaluzny, 1988). However, strategic change needs to accommodate all of the stakeholders, not just the dominant one.

Hospitals have traditionally had a paternalistic attitude toward their employees. Employees relied on the hospital to give them training when necessary and provide lifelong employment. Even during downsizing, employees were usually reassigned until finances improved (Hopkins, 1994).

Now, with for-profit hospitals, dramatic decreases in inpatient care, health care/financing reform, and intense competition, health care employees are no longer one big family. Health care now reacts to change like other "virtual" businesses: an ever decreasing core of permanent employees that expands or contracts to meet changing needs with contract, subcontract and temporary workers (Hopkins, 1994).

The primary external or environmental forces that encourage change are: marketplace changes such as new competitors or changes in customer demand; technological changes that alter, improve, or speed up the way of doing business; social and governmental changes in restrictions or enticements (Ivancevich and Matteson, 1993).

Examples of external or environmental forces encouraging the BADAMC merger are: the marketplace changes in Tricare, technological changes in telemedicine and information management, and organizational changes in

military downsizing. The relative importance of Fort Hood will continue to grow with the projected plan to make it one of only three Army "mega-installations".

Certain organizational conditions must be in place to facilitate change: pro-change leadership, precedent examples, structure and system of control that supports change, and an organizational culture that is not inherently opposed to the proposed change (Ivancevich and Matteson, 1993).

Change is difficult and complicated. Organizations have internal inertial pressures to resist change such as sunk costs in plant, equipment and specialized personnel; information flow constraints; internal politics fearing a loss due to redistribution/reorganization of power and knowledge; and an organizational history of success with in-place agreements and standard procedures (Morgan, 1989).

Organizations also have external inertial pressures and resistance to change such as legal, regulatory, and fiscal barriers; fear of loss of current organization legitimacy; and fear of duplicate or improved reactive strategic change by competitors (Morgan, 1989).

Resistance to change is normal; people inherently resist it. Change is risky, expensive, and requires enormous effort (Millum-Wood, 1992). Many people will make concerted attempts to maintain their current position and method of operation in the hope that change will fail and the status

quo will return (Diller, 1992).

People need stability and predictability in their lives and change threatens this basic need. Change requires adaptation skills and effort. This forced adaptation produces stress and resistance to change in an attempt to avoid this stress (Ivancevich and Matteson, 1993).

People are one of the most important resources of any organization. People in an organization are engaged in an exchange relationship. Strategic change requires an implicit or explicit renegotiation of that exchange relationship (Tichy, 1983).

However, getting people to accept or even encourage change is not impossible. Methods such as: communication/education, participation/involvement, emotional support, negotiation, cooptation, coercion (Ivancevich and Matteson, 1993), assigning only supportive leaders, and periodic reassessment of the member's acceptance are reported as effective (Kooi, White and Smith, 1988).

Trying to get people to accept change means trying to change their behavior. One of the determinants of behavior is attitude. Attitude refers to the tendency of a person to act toward someone or something. Understanding employee attitudes is important in predicting behavior (Ivancevich and Matteson, 1993).

An organizational survey is a useful tool in

determining current attitudes. It gathers reactions or opinions from a group of individuals about facilities and conditions which may affect them (Ulrich, 1983). A survey can be used to assess organizational culture (Goodstein and Burke, 1991). Survey feedback is an important source of information when planning organizational change (Daft, 1992). A survey is the best way to evaluate attitudes and organizational climate toward change such as a merger. Follow-up periodic surveys would also show how the members are responding to the merger (Kooi, White and Smith, 1988).

Mergers

The union of the organizations at DACH and BAMC to form an expanded medical center can best be categorized as an internal merger between two organizations that are already connected through Department of Defense (DOD), U.S. Army, Army Medical Department (AMEDD), and Health Service Support Agency (HSSA) relationships. A merger implies that one organization will join its assets with another in some predetermined arrangement. Other terms such as consolidation, combination, integration, or alliance could be applied, but all of these concepts involve merger activity (Kooi, White and Smith, 1988; Peterson and Fisher, 1991).

The merger of organizations is one type of strategic change. Mergers are a common occurrence today, and 1994 has

eclipsed 1989 as the most merger dominated year on record.

The healthcare industry, which is already weary from revolutionary changes in technology, governance, reimbursement, and reengineering, is also enduring the radical change of mergers (Bolman and Deal, 1994).

However, mergers are expensive and often fail. Mergers that appear "win-win" from a financial or market share perspective frequently fail because of management's failure to understand the people component of their organization. Stress and discomfort are created when a new organization with a new culture is formed from the merger of two different organizational cultures (Bolman and Deal, 1994).

Reimbursement restrictions and increased competition are the primary reasons for mergers in health care organizations. The restructuring of the industry has placed increased emphasis on corporations, competition, and profit (Kooi, White, and Smith, 1988).

Increased competition in the military health care system will be seen with the implementation of Tricare that will give the non-active duty patient a newfound choice of health care provider. The patient will be able to choose between a health maintenance organization (HMO), a preferred provider organization (PPO), standard Champus at a provider of choice, or a military health care facility (Department of Defense, 1994).

Tricare will require military health care facilities to be attractive and cost-effective in order to compete for patients who will have a choice of health care setting. The BADAMC merger must increase the convenience, access, and quality of health care, as perceived by our patients, and must do so in a cost effective manner.

Increased competition for survival also exists at the Army MEDCEN level. As the military downsizes, the number of Medical Centers will decrease. One of the primary criteria in deciding which MEDCENS to keep will be the quantity of active duty military served. The proposed BADAMC will greatly improve this relationship for BAMC by associating it with the very large troop population at Fort Hood.

Merger failure due to personnel issues and a "merger syndrome" combination of stress, culture change, and feeling of loss are common. A "we-they" attitude leads to disrupted operations, reduced productivity, and a general lack of support. More severe organizational dynamics that could result from the merger syndrome include political backstabbing and sabotage (Peterson and Fisher, 1991; Molloy, 1992).

Constant communication and staff involvement are required or the staff participants (the true assets in a service industry such as health care) will constantly question and resist a merger (Sherer, 1994; and Diller, 1992).

A negative reaction by the community may result from a merger if it is perceived as creating a decrease in services, convenience, or amenities. This negative reaction by the customer can have a negative effect upon the merged organization and its staff (Anderson, 1991; and Bergman, 1994). Bigger is not always better, and the economies of scale and centralized leadership are often offset by unmanageable size and complexity (Hagland, 1994).

The concept of merging Graduate Medical Education programs in order to improve the student learning experience has been well documented as a potential benefit of merging health care organizations (Tasman and Riba, 1993; Schwartz and Stone, 1991; Kendrick, 1993). Precedent for the BADAMC merger of GME at separated sites is the Mayo Clinic graduate medical education program in anesthesia that uses teaching and training sites dispersed among Florida, Minnesota, and Arizona. This fully accredited program uses video-teleconferencing to coordinate these sites (Scott, 1994).

Governmental health care agencies are following the civilian sector in increasing their consolidations and cooperative agreements in order to increase efficiency and scope of service (Popejoy, 1994). The merger of a military MEDCEN and a military Community Hospital has no precedent. However, the benefits of such an affiliation between similar civilian healthcare organizations has been described as a method of achieving economies of scale for the continuous

development of high cost medical technologies (Flagle, 1992).

Purpose

There are two reasons for doing this study:

- 1) To determine if there are members of the pediatric departments at DACH and/or BAMC that are identifiable by group membership that prefer to remain two separate pediatric departments, rather than merge into a single BADAMC pediatric department.
- 2) To determine if the members of the pediatric departments at DACH and/or BAMC view a single BADAMC pediatric department as a detriment, or an improvement, compared to the currently separate departments, in accomplishing the mission of military pediatric medicine.

The first reason for doing this study is based upon the theory that there is a relationship between the subjective choice for either merging or remaining separate and membership in an identifiable group. In functional form, this theory that choice varies as a function of group membership would be stated by the expression:
choice= f(group membership).

The second reason for doing this study is based upon the theory that there is a relationship between the subjective evaluation of mission accomplishment ability and the merger of separate pediatric departments. In functional

form, this theory that mission accomplishment varies as a function of a merger would be stated by the expression:
mission accomplishment ability= f(merger).

In order to test these theories, the following hypotheses have been formulated:

Hypothesis #1: There are individuals identifiable by group membership within the pediatric departments at DACH and/or BAMC that would prefer to remain separate departments rather than merge into a single BADAMC pediatric department.

The dependent variable for hypothesis #1 is the choice for remaining as two separate pediatric departments.

The independent variables for hypothesis #1 are the following fourteen **group membership** categories:

1. Location: Fort Hood or Fort Sam Houston
2. Age: under 40 years of age or 40 years of age and older
3. Years at current installation
4. Years in military/military employment
5. Gender: male or female
6. Primary employment: direct patient care or administrative
7. Group: military or civilian
8. Primary profession: physician or nurse or other
9. Percentage of duty/employment time with residency program
10. Knowledge level about BADAMC merger: little/none or moderate/considerable
11. Knowledge level about single pediatric department:

little/none or moderate/considerable

12. Opportunity for input: yes or no
13. Merger effects upon professional life: very negative; slightly negative; none; slightly positive; very positive
14. Merger effects upon personal life: very negative; slightly negative; none; slightly positive; very positive

These fourteen variables will be evaluated according to location at DACH or BAMC or merged BADAMC and thus produce forty-two possible predictor variables.

This study looked for a relationship between choice for remaining separate departments and membership in one of the identified fourteen groups. If a relationship is discovered, then that identified group could be interviewed to discover their reasons preferring separate departments. If specific problems existed for this group with the merger concept then corrective action on these problems, or education/persuasion of the group might produce support for the merger and prevent possible merger resistance.

However, if there is no difference in choice for remaining separate between the identified fourteen groups, then hypothesis #1 is false and choice is: only for the merger, or for remaining separate randomly dispersed among the pediatric departments without group membership, or for remaining separate related to group membership in other than

one of the fourteen identified groups.

Hypothesis #2: A single, merged BADAMC pediatric department is viewed by the members of both pediatric departments as an improvement over two separate pediatric departments in accomplishing the mission of military pediatric medicine. (The mission of military pediatric medicine is operationally defined as the three mission domains of: patient care, readiness, and graduate medical education).

The dependent variable for hypothesis #2 is the subjective evaluation of **improvement in mission accomplishment**.

The independent variable for hypothesis #2 is the **merged BADAMC pediatric department**.

If a relationship is discovered, then this indicates that the merger has a worthwhile purpose and would counter opposition claims that the change is more trouble than it is worth, or that it is change just for the sake of change.

However, if there is no difference in perceived improvement in mission accomplishment ability (or a degradation rather than an improvement), then either the merger concept itself, or the reasons for the lack of perceived significant improvement in mission accomplishment ability may need further investigation.

CHAPTER 2

METHOD AND PROCEDURE

Survey Development

The experimenter interviewed the Chief of the Department of Pediatrics at Brooke Army Medical Center, a board certified pediatric specialist with 23 years of pediatric military medicine experience. At this interview, the experimenter was granted permission to conduct this study. The Chief provided a list of the twenty identifiable missions of a military pediatric department which were grouped within the three military pediatric medicine mission domains of: patient care, readiness, and graduate medical education.

With this information and reference to Ulrich's text on organizational surveys, an initial version of a survey measuring instrument was developed. The survey format was patterned after a valid and reliable dental satisfaction survey (Harris et al, 1994).

The survey consisted of a brief introduction that explained the highlights of the BADAMC merger project, the planned creation of a single pediatric department, and some of the potential changes that may result. The survey

purpose, instructions, confidentiality, and voluntary participation were all specifically stated.

The survey itself consisted of three sections. Section I asked for demographic information. Section II asked for information about knowledge level and perception of the proposed expanded medical center ("BADAMC") merger concept. The key question was whether they preferred to merge, or remain separate departments. Section III asked for Likert scale comparisons for predicted effects upon pediatric mission accomplishments between a single, merged pediatric department, and the two separate departments that currently exist.

Consultants/Pilot Study

This initial version survey was then administered to the twelve member Pediatric Process Action (PAT) team that was formed for the implementation of a single BADAMC pediatric department. This PAT team consisted of seven DACH and five BAMC personnel. Seven were clinical pediatric nurses or physicians, and five were in a medical administrative position. They were all either military officers or civilians and represented over 170 years total experience in military medicine, with the majority being in pediatrics.

This PAT team served not only as a pilot study for the instrument, but also as subject matter expert consultants in

the instrument's development. The surveyor read the introduction, purpose, and instructions. The participants were timed for the survey completion. Open ended questions about the survey were included and verbal feedback was solicited.

The surveys were all completed within the ten minute predicted time. The introduction, purpose, and instructions were all considered clear. However, three participants stated they had difficulty making predictions about future effects of the planned merger, and one wrote "don't know" rather than circling one of the options as instructed. Therefore, additional explanation of the merger was made in the introduction and additional instructions now state: "Some questions will ask you to make predictions about the future. Select the **best answer based upon what you know.** Please do not change or omit any questions".

Three negative comments were presented regarding asking for exact ages. The survey now states: "under 40" or "40 or over".

One negative comment was made about the sequencing of the listed missions in Section III as being "haphazard". Actually, this was a positive comment because this list was randomized so that the three domains of patient care, readiness, and education would not be isolated in groups. The "haphazard" appearance was intentional so that the respondents had to read each item, rather than giving

blanket group answers, and was retained. Several participants stated they would like to add comments to some questions and therefore a comments page was included in the final survey instrument (Appendix, pages 64-68).

Data Gathering

The survey subjects consisted of the personnel that were listed on the TDAs (Tables of Distribution and Allowances) for the pediatric departments at DACH and BAMC, plus any staff members permanently assigned to the pediatric clinics, offices, or wards that were listed on a different TDA.

The participants included military and civilian, regardless of rank, occupation, or position, that worked in pediatrics. The only staff members that were excluded were part-time, temporary, or volunteer employees/personnel because the proposed merger change may have a different effect on them.

The surveyor met with the survey participants at their place of duty at both DACH and BAMC. Standardized explanation of the introduction, purpose and instructions was read by the surveyor. Coordination with office, clinic, or ward administrators was done in advance so that the surveys could be administered with as little interruption with schedules or procedures as possible. Staff, clinic, or ward meetings were used when available, but many of the

surveys were done during work breaks or shift changes on an individual basis. Since healthcare is a 24 hour, 365 day industry, arrangements were made to include evening, night and weekend personnel.

All participation by the subjects was strictly voluntary. A personnel roster was used to locate all of the potential participants, but none of the questionnaires were identified by name and all responses are confidential.

The survey was offered to 88 staff members at DACH and 107 staff members at BAMC with response rates of 91% (n=80) and 82% (n=88) respectively. The total response rate was 86% (n=168).

The data were entered into a spreadsheet (Quattro Pro 5.0: Borland International Inc.) and arithmetic means for each variable were computed. Any missing data due to unanswered questions were backfilled using these means. These backfilled means accounted for less than 2% of the responses.

These data were then imported into a database (dBase III Plus: Aston Tate Corporation) which were then imported into a statistical analysis software package (Microstat: Ecosoft, Inc.) for the data analysis.

CHAPTER 3

RESULTS

Demographics

Demographic comparisons of the participants based upon location (Table 1, page 30) revealed a younger population at DACH with 64% (n=51) under 40 years, while 51% (n=45) were 40 years or over at BAMC. BAMC personnel had more years of military employment with a mean of over 12 years while DACH averaged 9 years. Female staff predominated at DACH with 76% (n=61), while BAMC was more evenly distributed at 52% (n=46) female. BAMC had the majority of the physicians with 22 for 25% of their staff, whereas DACH had only 7 for 9% of staff. The GME program at BAMC was one reason for the large number of physicians assigned there, with 49% of BAMC duty time residency related, while DACH residency related employment averaged only 7%. At both sites, patient care was the dominant employment, averaging almost 80%.

The demographics of the physicians (n=29) (Table 2, page 31) averaged approximately twice as many years (3.45 years) at their installation at BAMC compared to DACH physicians (1.57 years). The standard deviation for years at installation was much larger at BAMC (2.59) than DACH (.79).

Physician males predominated at BAMC with 95% (n=21), while gender was more evenly distributed at DACH with 57% female (n=4). BAMC physicians had more residency involvement at 86.14%, and were exclusively military. DACH physicians had 25.71% residency involvement, and 1 of the 7 was a civilian. The small number of physicians at DACH (n=7) must be considered when making comparisons.

The nurse participants (n=86) (Table 3, page 32) were more evenly divided than the physicians, with 45 at DACH and 41 at BAMC. BAMC nurses were older with 46% 40 years or older, more years on installation with a 5.9 year average, and more years with the military at 12.6 years, compared to DACH with 31%, 3.4 years and 8.3 years respectively. BAMC nurses were more involved with the residency at 39%, while DACH nurses had only 8% residency related employment.

The professional category of "other" (n=53) (Table 4, page 33), which included everyone except physicians and nurses, showed similar number of participants (DACH n=28 and BAMC n=25) at both sites. Demographics between sites were also similar except for more residency involvement at BAMC (35%), than DACH (7%), and more staff members over 40 years of age at BAMC with 64%, versus DACH with 43%. Since this "other" group is composed of such an assortment of different occupations, it is difficult to compare meaningful demographic relationships and differences.

TABLE 1
DEMOGRAPHIC DESCRIPTIVE STATISTICS

Variables	DACH n=80			BAMC n=88			TOTAL n=168		
	#	MEAN	S.D.	#	MEAN	S.D.	#	MEAN	S.D.
Demographics									
Age									
<40	51	.64	.48	43	.49	.50	94	.56	.50
>40	29			45			74		
Yrs installation		4.49	5.01		5.47	6.43		5.00	5.81
Yrs milit. employ.		9.02	6.15		12.41	7.79		10.80	7.24
Gender									
Male	19	.24	.43	42	.48	.50	61	.36	.48
Female	61			46			107		
Employment									
Pt. care	63	.79	.41	70	.80	.39	133	.79	.40
Admin.	17			18			35		
Membership									
Military	40	.50	.50	55	.62	.49	95	.57	.50
Civilian	40			33			73		
Profession									
Physician	7	.09	.28	22	.25	.43	29	.17	.38
Nurse	45	.56	.50	41	.47	.50	86	.51	.50
Other	28	.35	.48	25	.27	.45	53	.31	.46
% Residency		7.06	19.65		49.39	41.04		29.23	38.85

note: calculations subject to rounding error discrepancies

TABLE 2
PHYSICIAN DESCRIPTIVE STATISTICS

Variables	DACH n=7			BAMC n=22			TOTAL n=29		
	#	MEAN	S.D.	#	MEAN	S.D.	#	MEAN	S.D.
Physician Demographics									
Age									
<40	4	.57	.53	12	.55	.51	16	.55	.50
>40	3			10			13		
Yrs installation		1.57	.79		3.45	2.59		3.00	2.42
Yrs milit. employ		9.43	5.38		12.05	6.30		11.41	6.10
Gender									
Male	3	.43	.53	21	.95	.21	24	.83	.38
Female	4			1			5		
Employment									
Pt care	6	.86	.38	20	.91	.30	26	.90	.31
Admin	1			2			3		
Membership									
Military	6	.86	.38	22	1.0	.00	28	.97	.19
Civilian	1			0			1		
% Residency		25.71	34.69		86.14	19.51		71.55	35.16

note: calculations subject to rounding error discrepancies

TABLE 3
NURSE DESCRIPTIVE STATISTICS

Variables	DACH n=45			BAMC n=41			TOTAL n=86		
	#	MEAN	S.D.	#	MEAN	S.D.	#	MEAN	S.D.
Nurse Demographics									
Age									
<40	31	.69	.47	22	.54	.50	53	.62	.49
>40	14			19			33		
Yrs installation		3.36	3.37		5.90	8.03		4.57	6.15
Yrs milit. employ		8.26	5.69		12.56	8.82		10.31	7.61
Gender									
Male	8	.18	.39	12	.29	.46	20	.23	.42
Female	37			29			66		
Employment									
Pt care	41	.91	.29	39	.95	.22	80	.93	.26
Admin.	4			2			6		
Membership									
Military	23	.51	.51	24	.59	.50	47	.55	.50
Civilian	22			17			39		
% Residency		8.01	20.94		38.59	38.33		22.64	33.95

note: calculations subject to rounding error discrepancies

TABLE 4
 "OTHER PROFESSIONAL" DESCRIPTIVE STATISTICS

Variables	DACH n=28			BAMC n=25			TOTAL n=53		
	#	MEAN	S.D.	#	MEAN	S.D.	#	MEAN	S.D.
"Other Professional"									
Demographics									
Age <40	16	.57	.50	10	.36	.49	25	.47	.50
>40	12			15			28		
Yrs installation		7.04	6.62		6.52	5.61		6.79	6.12
Yrs milit. employ		10.14	7.02		12.48	7.44		11.25	7.25
Gender									
Male	8	.29	.46	10	.36	.49	17	.32	.47
Female	20			15			36		
Employment									
Pt. care	16	.56	.50	12	.48	.51	28	.52	.50
Admin.	12			13			25		
Membership									
Military	11	.39	.50	10	.36	.49	21	.38	.49
Civilian	17			15			32		
% Residency		.71	3.78		34.76	40.79		16.77	32.71

note: calculations subject to rounding error discrepancies

Merger Concept

Questions about the merger concept (Table 5, page 36) showed that only 32% total combined professed "moderate or considerable knowledge" about the BADAMC merger. DACH had only 21% (versus 35% at BAMC) stating a moderate or high knowledge level of knowledge about the pediatric merger. BAMC and DACH both had an "input opportunity" at a low 18%. DACH saw a more positive "professional life effect" at 3.59, with BAMC at 3.14. The strongest negative response in this section was in "personal life effect" with BAMC at 2.43, while DACH was slightly positive at 3.15. Both DACH and BAMC had less than half in choice for the merger at 47% and 41%. The total choice for merger was 44%

When broken out by physician profession (Table 6, page 37), relatively high "moderate or considerable knowledge" was at both sites: DACH at 71% about the BADAMC merger and 57% the pediatric merger, with BAMC at 59% and 64%. DACH physicians stated a 60% input opportunity, while BAMC physicians stated only 32%. Both physician groups saw positive professional effects, but DACH higher at 3.85, versus 3.25 for BAMC. The largest difference was in opposite views on personal life effects, with DACH physicians positive at 3.42, but BAMC physicians negative at 2.18.

DACH physicians were for the merger at 71%, while BAMC had only 43% in support. The small number of Darnall physicians (n=7) must be considered when making comparisons.

Nurses (Table 7, page 38) showed a low level of knowledge about BADAMC (DACH 27% and BAMC 20%), and pediatric merger (DACH 18% and BAMC 20%). Both also showed a low input opportunity with DACH nurses at 16% and BAMC nurses at the survey low of only 7%. Nurses had the largest difference between sites regarding life effects. DACH nurses saw a positive professional life effect at 3.82, while BAMC had a nearly neutral at a 3.02 mean. They differed most significantly in personal life effect with DACH at a slightly positive 3.20, while BAMC was decidedly negative at 2.41. DACH nurses were almost evenly divided with 48% support for the merger, but only 34% of the nurses supported it at BAMC. Total nurse support for the merger was 41%.

The professional category "other" (Table 8, page 39) had both sites with a low level of knowledge about the BADAMC merger (25% DACH and 36% BAMC) and the pediatric department merger (18% DACH and 36% BAMC). BAMC "others" had more input (24%) than the total survey average of 18%, while DACH "others" were less at 11%. Both sites were slightly positive for professional life effects (3.15 DACH and 3.23 BAMC). DACH was nearly neutral on personal life effects at 3.02, while BAMC was negative at 2.67. DACH "others" had only 39% for the merger, while BAMC were nearly even at 52%.

TABLE 5
MERGER CONCEPT DESCRIPTIVE STATISTICS

Variables	DACH		BAMC		TOTAL	
	n=80		n=88		n=168	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
Merger Concept						
Know BADAMC merger	.30	.46	.34	.47	.32	.47
Know peds merger	.21	.41	.35	.48	.29	.45
Input opportunity	.18	.38	.18	.38	.18	.38
Prof. life effect	3.59	1.14	3.14	1.17	3.35	1.18
Pers. life effect	3.15	.96	2.43	1.02	2.78	1.06
Choice for merger	.47	.49	.41	.49	.44	.49

note: calculations subject to rounding error discrepancies

TABLE 6
PHYSICIAN DESCRIPTIVE STATISTICS

Variables	DACH		BAMC		TOTAL	
	n=7	MEAN S.D.	n=22	MEAN S.D.	n=29	MEAN S.D.
Merger Concept						
Know BADAMC merger	.71	.49	.59	.50	.62	.49
Know peds merger	.57	.53	.64	.49	.62	.49
Input opportunity	.60	.51	.32	.48	.39	.49
Prof. life effect	3.85	1.35	3.25	1.31	3.39	1.32
Pers. life effect	3.42	1.71	2.18	1.05	2.48	1.33
Choice for merger	.71	.49	.43	.49	.50	.50

note: calculations subject to rounding error discrepancies

TABLE 7
NURSE DESCRIPTIVE STATISTICS

Variables	DACH n=45 MEAN S.D.	BAMC n=41 MEAN S.D.	TOTAL n=86 MEAN S.D.
Merger Concept			
Know BADAMC merger	.27 .45	.20 .40	.24 .42
Know peds merger	.18 .39	.20 .40	.19 .39
Input opportunity	.16 .37	.07 .26	.12 .32
Prof. life effect	3.82 1.09	3.02 1.27	3.44 1.24
Pers. life effect	3.20 .95	2.41 1.09	2.82 1.09
Choice for merger	.48 .50	.34 .48	.41 .49

note: calculations subject to rounding error discrepancies

TABLE 8
"OTHER PROFESSIONAL" DESCRIPTIVE STATISTICS

Variables	DACH n=28	BAMC n=25	TOTAL n=53
	MEAN S.D.	MEAN S.D.	MEAN S.D.
Merger Concept			
Know BADAMC merger	.25 .44	.36 .49	.30 .46
Know peds merger	.18 .39	.36 .49	.26 .45
Input opportunity	.11 .32	.24 .44	.17 .38
Prof. life effect	3.15 1.08	3.23 .87	3.19 .98
Pers. life effect	3.04 .74	2.67 .85	2.86 .80
Choice for merger	.39 .48	.52 .49	.45 .48

note: calculations subject to rounding error discrepancies

Mission Domains

The descriptive statistics regarding the domains of the mission of pediatrics (Table 9, page 41), displayed all domains to be positive toward effects that the merger would have regarding improvement in the mission accomplishment of the pediatric medicine departments. The highest mean score was for the graduate medical education domain at DACH (3.92), and the lowest was for the readiness domain at BAMC (3.22). However, the BAMC readiness domain of this survey was not reliable and therefore not valid for this study. Patient care mean scores were similarly positive at both sites (DACH 3.62 and BAMC 3.60). The total mission accomplishment of all domains were positive at both sites (DACH 3.65 and BAMC 3.50) with a total combined mean score of 3.58.

TABLE 9
DESCRIPTIVE STATISTICS

Variables	DACH		BAMC		TOTAL	
	n=80	MEAN	n=88	MEAN	n=168	MEAN
	S.D.		S.D.		S.D.	
Mission Domains						
Patient care	3.62	.97	3.60	.89	3.59	.92
Readiness	3.41	.89	3.22	.81	3.31	.85
GME	3.92	1.01	3.42	.93	3.76	.98
Total mission	3.65	.96	3.50	.88	3.58	.92

note: calculations subject to rounding error discrepancies

Validity and Reliability

The survey instrument had validity. It had accuracy in that it measured what it proposed to measure. The items in Sections I, II and III have face validity in that by appearance alone the survey asked questions relevant to the topic under study.

The survey also had content validity. The BAMC Pediatric Department Chairman was an expert on the subject of pediatric medicine and provided the technical information necessary to make up the components of the mission of pediatric medicine. The survey content was then validated and improved through the pilot testing, critiques, and agreements from the BADAMC Pediatric Process Action Team that was composed of several experienced subject matter experts.

Section III regarding the mission of pediatrics had construct validity in that it had all three domains, or constructs, of the mission of military pediatrics: patient care, readiness, and graduate medical education.

Item-Total correlations for Section II (Table 10, page 44) demonstrated validity with 10/15 questions above the critical r value, 2-tail @ p<.05.

Item-Total correlations for Section III demonstrated

validity in both the patient care domain (Table 11, page 45) with 30/33 questions above the r value, 2-tail @ p< .05, and graduate medical education domain (Table 12, page 46) with 14/15 questions above the critical r value, 2-tail @ p< .05. However, the readiness domain (Table 12, page 46) did not demonstrate strong item-total validity with only 4/12 questions above the critical r value, 2-tail @ p< .05.

Randomized block Chronbach's alpha was used to test for reliability which is defined as the consistency, reproducability, or dependability of the survey instrument. Section II (Table 10, page 44) was reliable at both sites and for the total survey in that they measured above the industry standard of Chronbach's alpha index of 0.7.

Section III (Tables 11 and 12, pages 45 and 46) was reliable at both sites and total for both the patient care and the GME domains. However, the survey was not reliable for the readiness domain at BAMC with a Chronbach's alpha score of only .35. Thus, information in this category had no validity either, since reliability is necessary for validity. The readiness domain was reliable for both DACH and total score.

TABLE 10
VALIDITY AND RELIABILITY OF ITEMS
SECTION II

	Item-Total Correlation (r values)			Chronbach's Alpha		
	DACH n=80	BAMC n=88	TOTAL n=168	DACH	BAMC	TOTAL
Merger Concept				.72	.71	.73
Know BADAMC Merger	.02	.08	.05			
Know Peds Merger	.15	.21	.17			
Input Opportunity	.30	.33	.31			
Prof. Life Effect	.50	.60	.55			
Pers. Life Effect	.40	.49	.44			
critical value (2-tail, .05)	±.22	±.21	±.15			

note: calculations subject to rounding error discrepancies

TABLE 11
VALIDITY AND RELIABILITY OF ITEMS
SECTION III

Variables	Item-Total Correlation (r values)			Chronbach's Alpha		
	DACH n=80	BAMC n=88	TOTAL n=168	DACH	BAMC	TOTAL
Patient Care Domain				.94	.84	.86
Inpatient treatment	.42	.49	.46			
Exam/physicals	.49	.37	.43			
Psycho-social care	.48	.38	.43			
Referrals DACH-BAMC	.32	.33	.33			
Well-baby clinic	.39	.18	.28			
EFMP	.49	.35	.42			
Chronic illness	.41	.34	.38			
Normal newborn	.37	.38	.37			
Tertiary care	.41	.42	.42			
Acute minor illness	.24	.18	.21			
Emergency walk-in	.32	.18	.24			
critical value (2-tail, .05)	±.22	±.21	±.15			

note: calculations subject to rounding error discrepancies

TABLE 12
VALIDITY AND RELIABILITY OF ITEMS
SECTION III

Variables	Item-Total Correlation (r values)			Chronbach's Alpha		
	DACH n=80	BAMC n=88	TOTAL n=168	DACH	BAMC	TOTAL
Readiness Domain				.80	.35	.74
Military training	.10	.11	.11			
PROFIS	.19	.13	.16			
Physical fitness	.16	.06	.12			
Deployment	.23	.26	.25			
GME Domain				.89	.75	.85
Resident clin. exp.	.33	.38	.36			
Resident didactics	.22	.34	.28			
Program interaction	.44	.22	.34			
Research	.29	.32	.31			
Faculty oversight	.38	.16	.28			
critical r value (2-tail, .05)	±.22	±.21	±.15			

note: calculations subject to rounding error discrepancies

Inferential Statistics

The patient care employment group at BAMC was the only identifiable group that was statistically significant @ p<.05 in choice to remain separate pediatric departments, rather than merge into a single pediatric department.

The student's t test for mean differences between Section I demographic groups (Table 13, page 49) showed four groups (years military employment, gender, physician profession, and percent work residency related) with significant differences @ p<.01 and one group (age) @ p<.05. These differences demonstrated that several definite differences in demographics existed between the installations.

However, only "male gender" (p<.01) and "percent work residency connected" (p<.05) were significant demographic groups at DACH, and they were for choice for the merger (Table 14, page 50). At BAMC the only significant demographic group was "patient care employment" (p<.05), and this was for remaining separate departments.

The Section II merger concept questions had significant mean differences between sites (Table 15, page 51) regarding knowledge of the pediatric merger (p<.05), and regarding both professional or personal life effects (p<.01).

Both sites and combined total had significant relationships ($p<.01$) between choice for the merger and input opportunity, positive professional life effects, and positive personal life effects(Table 16 ,page 52). There was also a significant relationship between combined total choice for the merger and knowledge about the pediatric department merger ($p<.05$).

The mission domain questions revealed that all the pediatric department mission domains were positive for mission improvement with choice for the merger. However, Student t tests showed (Table 17, page 53) only the GME domain was significant at DACH ($p<.05$), while BAMC was significant for both the patient care domain ($p<.05$), and the GME domain ($p<.05$). Neither site was significant for the readiness domain, a moot point regarding BAMC since the survey was determined as not reliable at BAMC for that domain. Total combined scores showed both the patient care domain ($p<.01$) and GME domain ($p<.01$) were significant for choice for the merger and mission improvement. Total mission domain scores for total combined sites were also significant with choice for the merger ($p<.05$).

TABLE 13
INFERENTIAL STATISTICAL TESTS
OF BETWEEN DEMOGRAPHIC GROUP MEAN DIFFERENCES

Predictor Variable	DACH mean n=80	BAMC mean n=88	Student's t test df=166
Age			
<40	.64	.49	1.95#
Yrs installation	4.49	5.47	-1.09
Yrs milit. employ.	9.02	12.41	-3.11*
Gender			
male	.24	.48	-3.31*
Employment			
Pt care	.79	.80	-.35
Membership			
military	.50	.62	-1.63
Profession			
Physician	.09	.25	-2.83*
Nurse	.56	.47	1.25
Other	.35	.27	1.07
% Residency	7.06	49.39	-8.39*

$p \leq .05$

* $p \leq .01$

note: calculations subject to rounding error discrepancies

TABLE 14

INFERENTIAL STATISTICAL TESTS
OF CORRELATIONS OF CHOICE WITH DEMOGRAPHIC PREDICTOR VARIABLES

Predictor Variable	DACH Student's		BAMC Student's		TOTAL Student's	
	r value	t test df=78	r value	t test df=86	r value	t test df=166
Age <40	.01	.09	-.06	-.57	-.02	-.25
Yrs installation	-.19	-1.74	.02	.15	-.07	-.97
Yrs military	-.08	-.69	.15	1.36	.04	.47
Gender male	.37	3.49*	.05	.38	.17	2.22#
Employment pt care	.10	.88	-.26	-2.53#	-.09	-1.14
Membership military	.09	.80	.18	1.71	.13	1.67
Profession physician	.15	1.40	.02	.18	.06	.72
nurse	.02	.20	-.14	-1.30	-.06	-.72
other	-.12	-1.03	.13	1.25	.01	.18
% Residency	.25	2.29#	-.12	-1.16	-.04	-.49
critical value (2-tail, .05)	$\pm .22$		$\pm .21$		$\pm .15$	

p ≤ .05

* p ≤ .01

note: calculations subject to rounding error discrepancies

TABLE 15

INFERENTIAL STATISTICAL TESTS
OF BETWEEN MERGER CONCEPT GROUP MEAN DIFFERENCES

Predictor Variable	DACH mean n=80	BAMC mean n=88	Student's t test df=166
Know BADAMC merger	.30	.34	.51
Know Peds merger	.21	.35	2.02#
Input opportunity	.18	.18	-.04
Prof. life effect	3.49	3.14	2.55*
Pers. life effect	3.15	2.43	4.75*
Choice for merger	.47	.41	.71

p ≤ .05

* p ≤ .01

note: calculations subject to rounding error discrepancies

TABLE 16

INFERENTIAL STATISTICAL TESTS
OF CORRELATIONS OF CHOICE WITH MERGER CONCEPT PREDICTOR VARIABLES

Predictor Variable	DACH Student's r value	DACH Student's t test df=78	BAMC Student's r value df=86	BAMC Student's t test df=86	TOTAL Student's r value	TOTAL Student's t test df=166
Know BADAMC merg.	.02	.21	.08	.74	.05	.66
Know Peds merger	.16	1.40	.20	1.95	.17	2.26#
Input opportunity	.30	2.79*	.33	3.22*	.31	4.28*
Prof. life effect	.50	5.06*	.60	6.88*	.55	8.45*
Pers. life effect	.40	3.88*	.49	5.16*	.44	6.27*

critical value
(2-tail, .05) $\pm .22$ $\pm .21$ $\pm .15$

$p \leq .05$

* $p \leq .01$

note: calculations subject to rounding error discrepancies

TABLE 17
INFERENTIAL STATISTICAL TESTS
OF CORRELATIONS OF CHOICE WITH MISSION DOMAIN VARIABLES

Domain Variable	DACH Student's t test	BAMC Student's t test	TOTAL Student's t test
Patient Care	df=68 1.78	df=76 2.05#	df=156 2.64*
Readiness	df=75 1.08	df=83 1.37	df=163 1.71
GME	df=74 2.24#	df=82 1.98#	df=162 2.54*
Total	df=59 1.64	df=67 1.64	df=147 2.04#

p ≤ .05

* p ≤ .01

note: calculations subject to rounding error discrepancies

CHAPTER 4

DISCUSSION

The results of the survey showed that the relationship in hypothesis #1 was correct. There was an identifiable group that would prefer to remain separate pediatric departments rather than merge into a single BADAMC pediatric department.

The fact that there was only one group is significant. The patient care at BAMC group appear to perceive this planned merger as a burden that they will be the ones to bear. They are the ones who will be doing the moving to DACH on either a temporary or permanent basis. Either way, this is a drastic change that was not predicted, or even thought about, prior to the very recent vision to create a BADAMC.

The overcrowded conditions at the Fort Hood/Killeen area, the 150 mile distance, housing shortages, school problems, isolated location, and lack of social amenities are perception factors that may affect one's attitude towards this merger. Change is difficult and painful. Change that may be perceived as personally negative is all the more anxiety producing.

DACH saw the merger in a more positive light because they may not need to change as much, and most of the changes

were seen as gains. Some DACH staff expressed anxiety over possible "takeover" by BAMC, and possible problems in communication or command/control with a single department. However, these fears were not as significant or widespread as the more radical change perceived by the BAMC patient care group.

The fact that the groups did not break out on the basis of seniority membership showed these attitudes penetrated across age, years of experience, or years on station factors. The attitudes also penetrated across military and civilian boundaries. The civilians tended to be more vocal in their feeling about this merger when the survey introduction was read to them. However, this difference did not remain when the anonymous written survey was completed.

This survey was completed during January and February of 1995. There had already been a strategic planning conference on the merger, several Process Action Team (PAT) meetings, and a few articles in the local and community press. However, this time period would have to be considered as "early" in the merger process. Since the survey time period, there have been: another strategic planning conference, many more PAT meetings, and many more articles in the press and on television. Therefore, the knowledge level of both BAMC and DACH would be expected to be much higher now, than when this survey was completed.

The survey itself provided both an increased knowledge

level and an opportunity for input. The participants tended to have fewer questions and were less surprised by the merger concept later in the survey period. The "grapevine information system" spread the word about both the survey and the merger itself. The chance to voice an opinion through the survey process itself was also frequently stated as a positive and welcome experience by the participants. The survey results on input opportunity would probably be different today.

The world is changing rapidly and dramatically. Nowhere is this change more significant than in the U. S. military healthcare system. Both the military and civilian staff are anxious about the future. During this survey period, the anxiety level about BAMC was especially heightened because of numerous press and television reports about the rumored possibility of the U.S. Air Force acquiring the new BAMC medical facility scheduled to be opened in 1996. Several participants stated that they believed this survey was related to this Air Force rumor. This rumor may have affected the results, even though the participants were told that there was no relationship.

Hypothesis #2 was also correct in that choice for pediatric department merger was viewed as an improvement in accomplishing the patient care, graduate medical education, and total overall mission of pediatric medicine. The readiness domain portion of the study was neither reliable,

nor valid for BAMC. Although positive for improvement with the merger, the readiness domain was not statistically significant for DACH or the combined total.

The statistically significant relationship toward mission improvement with choice for the merger for everything except readiness demonstrated that this merger change has a legitimate purpose. Even though the survey participants were ambivalent on desiring the merger, they recognized that it was an improvement in their very reason for existence: accomplishing the mission of pediatric medicine. This positive attitude toward the future effects of the merger can be used in gaining support for the merger through an educational program about the merger.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The patient care employment group at BAMC was the only group that was statistically significant for remaining separate pediatric departments. The choice for pediatric department merger was viewed as an improvement in accomplishing the patient care and graduate education missions of pediatric medicine.

The anxiety that the patient care group at BAMC had toward the merger is understandable and should not be ignored. Fear of the unknown was a major portion of this attitude. As more information about the purpose and organization of the merger is delivered, this anxiety should decrease.

It was noted during the survey process that those on the night shift were especially uninformed about the merger. This shift comes to work in the evening and leaves in the early morning with little interaction with other staff, administrators, or leadership. Special attention to include this group in plans and decisions should be implemented. One possibility to increase communication might be a merger newsletter that provides periodic updates on plans and accomplishments in the merger process.

As solutions to personal life problems associated with the merger (such as housing and transportation) are discovered and implemented, the merger may be seen more as an opportunity, and less as a burden.

The fact that all the domains were positive for improvement with the merger, and that two of the three domains, and the total mission were viewed as statistically significant positive improvements, are encouragements to all those involved in the merger.

It is logical that graduate medical education was seen by both sites, and total combined, as an improvement since providing improved clinical experience for residents was one of the primary reasons for initiating the merger.

Although positive at both sites, the patient care domain was seen as more of an improvement through merger by the BAMC pediatric staff than DACH's. One possible reason is that most of the DACH staff may not be aware of the hardships and problems that the pediatric patients and their families must endure when referred to BAMC from DACH.

The BAMC staff that treats these referred pediatric patients, and their families, interacts with them and knows about the long bus rides, followed by difficult and confusing transportation, housing, and eating arrangements on the unfamiliar Fort Sam Houston post. These trips are often done multiple times with considerable stress, and frequently with out-of-pocket expenses that are very

difficult for young soldiers and their families. Except for the referring physician, the DACH staff may be totally unaware of the referral and their difficulties.

The readiness domain survey unreliability at BAMC may have been due to either not understanding the terms such as PROFIS, or not seeing the relevance between this domain and the merger. A tertiary level care MEDCEN, such as BAMC, tends to focus on complicated patient care and GME. Many of their patients are very sick patients referred to them for their higher level of specialized clinical expertise and equipment. Medical treatment and resident instruction with these very sick patients may be seen by many MEDCEN staff members as their primary mission, rather than readiness.

A MEDDAC, such as DACH, is more intimately involved with readiness issues. Primary care on young soldiers and their families is their focus. These soldiers are frequently deployed and keeping them physically fit is always paramount. The positive score by DACH for readiness improvement with a merger is encouraging. It may not have been statistically significant due to the large number of civilian employees surveyed that may not have understood or related to readiness, and its terminology.

The purpose of this survey was to obtain information. It was not to ask permission for the merger from the participants. There are a few that might say that since this is the military and not a democracy, then one should not

even ask how the participants view the merger. These few might say that all the leadership has to say is: "do it", and it will be done.

However, as stated in the literature review, participation and opportunity for input are essential to obtain cooperation and ownership, defeat resistance, and achieve success. Those in the military healthcare system are highly educated, highly motivated individuals who are required to think and act independently on a constant basis.

These individuals will, of course, "do it" when told. However, for this merger to be a success and accomplish its potential ("to be all it can be"), the staff must be supportive, motivated, and united. They must "do it" to the best of their ability. Blind obedience does not lead to motivated health care workers. However, buying into the merger through education and input opportunity will create a successful BADAMC.

On request, the results of this study have been briefed to: the Executive Board for The Runbaugh Health Science Center (the new name for the BADAMC merger), General Claypool's MEDCEN Staff Meeting, and the Pediatric Department Chief's at both DACH and BAMC.

Many have expressed positive comments regarding the information obtained from this survey. General Claypool (the MEDCEN/HSSA who had the original vision to merge) stated that this is "important knowledge that needs to be spread".

The project officer for the Runbaugh Health Science Center stated the data were "invaluable" in her work toward accomplishing this merger. She plans to initiate a Runbaugh newsletter to increase communication and knowledge about the merger.

This study provided information based upon organizational attitude research. The act of surveying also provided education and opportunity input for the participants. It should be followed by additional research in several areas: in the BAMC/DACH pediatric departments to test for how, and if, attitudes have changed since this "early" survey; in other BAMC/DACH medical departments that are planning to merge to test for similarities and differences between medical departments; in other MEDDACS within the HSSA that may be joining this Runbaugh Health Science Center merger; and, in other HSSAs that may benefit from their own internal merger designed to create a virtual "hospital without walls".

Appendix

PEDIATRIC DEPARTMENT SURVEY

IT SHOULD TAKE NO MORE THAN 10 MINUTES TO COMPLETE THIS SURVEY

INTRODUCTION: We are investigating the concept of combining the separate pediatric departments of Darnall Army Community Hospital (DACH) and Brooke Army Medical Center (BAMC) into a single pediatric department in an expanded medical center, "BADAMC".

This single department would be considered one staff with one chain of command. Staff rotations from BAMC to DACH would initially focus on Graduate Medical Education residency programs. Other personnel, to include support staff, may be included in rotations in the future. Improvements in patient/family transport, patient family temporary housing, and neonatal capabilities are planned. Telemedicine/teleconferences would be relied upon. Mergers in departmental functions and staffs such as budgets, committees, readiness issues, etc. may or may not occur.

PURPOSE: The purpose of this questionnaire is to determine the possible effects of changing from two separate pediatric departments into a single pediatric department.

Your participation in this survey is completely voluntary. The results will be used for research only and not to change Army policy. Responses will not be identified by name.

INSTRUCTIONS: There are three sections to complete. Section I asks for background information. Section II asks questions about the merger concept. Section III asks you to compare your predicted effects of a merged single pediatric department with the two separate pediatric departments that currently exist. Some questions will ask you to make predictions about the future. Select the **best answer based upon what you know**. Please do not change or omit any questions.

Thank you for your participation in this survey.

SECTION I: Background Information. Please complete all items.

1. What is your age? (circle one): under 40 40 or over

2. Current installation? (circle one): Fort Hood Fort Sam Houston

3. Total years at current installation? _____

4. Years in military or employed by military? _____

5. Gender (circle one): male female

6. Your primary employment would best be described: (circle one)

direct patient care administrative

7. What group membership best describes you? (circle one)

military civilian

8. What is your primary profession? (circle one)

Physician Nurse Other

9. What percentage (0-100%) of your duty or employment time is directly connected with the residency training program?
(Write in percentage number estimate)

_____ %

Section II: The BADAMC and merger concept. Please complete all items. Select the **best answer based upon what you know now**. This is not a test and there are no wrong answers.

1. How knowledgeable about the merger of BAMC and DACH are you? (circle one)

little or no knowledge moderate or considerable knowledge

2. How knowledgeable about the creation of a single pediatric department are you? (circle one)

little or no knowledge moderate or considerable knowledge

3. Do you feel you have had an opportunity to provide input into the creation of a single pediatric department? (circle one)

yes no

4. What effect do you believe a single pediatric department will have upon your professional life? (circle one)

very negative slightly negative no effect slightly positive very positive

5. What effect do you believe a single pediatric department will have upon your personal life? (circle one)

very negative slightly negative no effect slightly positive very positive

6. Overall, would you prefer the creation of a single pediatric department or remain two separate pediatric departments? (circle one)

create single pediatric department remain two separate pediatric departments

Section III: Please indicate on the scale below your opinion of the effects of a "BADAMC" single pediatrics department compared to the two separate pediatric departments at DACH and BAMC.

This is not a test. There are no right or wrong answers. Please answer **all** questions. Choose what you believe to be the **best answer**. Do not omit any questions.

Circle the number that best completes the statement:
"A single BADAMC pediatric department would have the following effect compared to the current situation with two separate pediatric departments at DACH and BAMC: _____".

1 2 3 4 5
substantially degrade slightly degrade no effect slightly improve substantially improve

-
- | | |
|---|-----------|
| 1. Hospital inpatient treatment | 1 2 3 4 5 |
| 2. Routine examinations and physicals | 1 2 3 4 5 |
| 3. Child psycho-social care
(eg. child abuse, school problems) | 1 2 3 4 5 |
| 4. Clinical experience for residents | 1 2 3 4 5 |
| 5. Military skills training for staff members | 1 2 3 4 5 |
| 6. Referral of patients between DACH and BAMC | 1 2 3 4 5 |
| 7. Didactic training for residents | 1 2 3 4 5 |
| 8. Well-baby clinic visits | 1 2 3 4 5 |
| 9. Resident interaction with other training programs | 1 2 3 4 5 |

1 substantially degrade	2 slightly degrade	3 no effect	4 slightly improve	5 substantially improve
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- | | |
|--|-----------|
| 10. PROFIS training and organization | 1 2 3 4 5 |
| 11. Research | 1 2 3 4 5 |
| 12. Exceptional family member program | 1 2 3 4 5 |
| 13. Faculty oversight/mentoring for residents | 1 2 3 4 5 |
| 14. Chronic serious illnesses (eg. diabetes) | 1 2 3 4 5 |
| 15. Normal newborn care | 1 2 3 4 5 |
| 16. Tertiary care (eg. cancer, major surgery) | 1 2 3 4 5 |
| 17. Staff member physical fitness/weight control | 1 2 3 4 5 |
| 18. Acute minor illnesses | 1 2 3 4 5 |
| 19. Emergency care on a walk-in basis | 1 2 3 4 5 |
| 20. Deployment/backfill assignments and organization | 1 2 3 4 5 |

Thank you for completing this survey.

Are there any questions or additional comments that you would like to make that may be of some help in this research?
(optional)

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